

STATE WEATHER SERVICES.

[Temperature in degrees Fahrenheit; precipitation, including melted snow, in inches and hundredths.]

The following extracts and summaries are republished from reports for January, 1891, of the directors of the various state weather services:

ALABAMA.

Temperature.—The mean was 2.2 above the normal; maximum, 80, at Citronelle, 30th; minimum, 18, at Jasper, 4th; greatest monthly range, 53, at Citronelle; least monthly range, 38, at Mobile.

Precipitation.—The average was 0.67 above the normal; greatest monthly, 8.11, at Jasper; least monthly, 2.96, at Citronelle.

Wind.—Prevailing direction, northwest.—*Prof. P. H. Mell, Auburn, director; J. M. Quarles, Private, Signal Corps, assistant.*

ARKANSAS.

Temperature.—The mean was 4.7 above the normal; maximum, 71, at Lead Hill, 26th; minimum, 13, at Lead Hill, 13th; greatest monthly range, 58, at Lead Hill; least monthly range, 32, at Brinkley and Forrest City.

Precipitation.—The average was 1.30 above the normal; greatest monthly, 7.68, at Little Rock; least monthly, 1.29, at Fayetteville.

Wind.—Prevailing direction, north.—*M. F. Locke, Commissioner of Agriculture, Little Rock, director; F. H. Clarke, Sergeant, Signal Corps, assistant.*

COLORADO.

Temperature.—The mean was 3.0 below the normal; maximum, 73, at Bennet, 5th; minimum, —36, at Breckenridge, 12th and 30th; greatest monthly range, 102, at Breckenridge; least monthly range, 40, at First View.

Precipitation.—The average was considerably above the normal; greatest monthly, 5.70, at Cumbres; least monthly, 0.06, near Pagoda.

Wind.—Prevailing direction, west.—*W. S. Miller, Sergeant, Signal Corps, Denver, assistant.*

ILLINOIS.

Temperature.—The mean was 7.5 above the normal of the last 13 years; maximum, 63, at Flora and Greenville, 27th; minimum, —2, at Cockrell, 3d.

Precipitation.—The average was 0.48 below the normal of the last 13 years; greatest monthly, 4.58, at Golconda; least monthly, 0.56, at Pana.

Wind.—Prevailing direction, northwest.—*John Craig, Sergeant, Signal Corps, Springfield, in charge.*

INDIANA.

Temperature.—Maximum, 66, at Huntingburgh, 27th; minimum, 2, at Point Isabel, 1st; greatest monthly range, 50, at Huntingburgh and Princeton; least monthly range, 36, at Shelbyville.

Precipitation.—Greatest monthly, 5.20, at De Gonia Springs; least monthly, 0.85, at Logansport.

Wind.—Prevailing direction, southwest.—*Prof. H. A. Huston, La Fayette, director; C. F. R. Wappenhans, Sergeant, Signal Corps, assistant.*

IOWA WEATHER AND CROP SERVICE.

This was the warmest January in the last ten years.

Temperature.—The mean was 10 above the normal; maximum, 58, at Sioux City, 19th; minimum, —4, at Manson, 2d and 12th, and at Bancroft, 31st; greatest monthly range, 50, at Bancroft; least monthly range, 32, at Eagle Grove.

Precipitation.—Greatest monthly, 3.99, at McCausland; least monthly, 0.61, at Fort Madison.

Wind.—Prevailing direction, northwest.—*J. R. Sage, Des Moines, director; G. M. Chappel, Sergeant, Signal Corps, assistant.*

KANSAS.

Temperature.—The mean ranged from 5 to 10 above the normal; maximum, 71, at Shields, 13th and 18th; minimum, —3, at Lakin and Spearville, 16th; greatest monthly range, 73, at Shields; least monthly range, 40, at Grainfield.

Precipitation.—The average was above the normal, except in the extreme northwest and southeast; greatest monthly, 4.35, at Kingman; least monthly, 0.30, at Page City.

Wind.—Prevailing direction, northwest.—*Prof. J. T. Lovewell, Topeka, director; T. B. Jennings, Sergeant, Signal Corps, assistant.*

KENTUCKY.

Temperature.—The mean was about 3.0 above the normal; maximum, 68, at Edmonton, 30th; minimum, 14, at Harrodsburgh, 7th; greatest monthly range, 50, at Edmonton; least monthly range, 38, at Louisville.

Precipitation.—The average was about 1.25 above the normal; greatest monthly, 7.83, at Central City; least monthly, 4.30, at Caddo.

Wind.—Prevailing direction, southwest.—*Dr. E. A. Grant, Louisville, director; Frank Burke, Sergeant, Signal Corps, assistant.*

LOUISIANA.

Temperature.—The mean was nearly normal; maximum, 81, at Plaquemine, 31st, and at Houma, 29th; minimum, 20, at Plaquemine, 14th, at Lake Charles, 12th, and at Houma, 13th; greatest monthly range, 61, at Houma and Plaquemine; least monthly range, 30, at Winnaborough.

Precipitation.—The average was 2.31 above the normal; greatest monthly, 13.60, at Cheneyville; least monthly, 0.06, at Girard.

Wind.—Prevailing direction, north.—*George E. Hunt, Sergeant, Signal Corps, New Orleans, in charge.*

MICHIGAN.

Temperature.—The mean was 4.4 above the normal of the last 15 years; maximum, 59, at Benton Harbor, 1st; minimum, —20, at Cheboygan, 16th; greatest monthly range, 60, at Cheboygan; least monthly range, 29, at Atlantic.

Precipitation.—The average was 0.34 below the normal of the last 15 years; greatest monthly, 4.76, at Roscommon; least monthly, 0.68, at Chelsea.

Wind.—Prevailing direction, southwest.—*N. B. Conger, Sergeant, Signal Corps, Lansing, director.*

MINNESOTA.

Temperature.—Maximum, 49, at Faribault, 19th and 21st, and at Minneapolis, 20th; minimum, —26, at Pokegama Falls, 16th; greatest monthly range, 68, at Pokegama Falls; least monthly range, 40, at La Crosse, Wis.

Precipitation.—Greatest monthly, 2.50, at Saint Charles; least monthly, 0.06, at Montevideo.

Wind.—Prevailing direction, northwest.—*John Healy, Corporal, Signal Corps, Minneapolis, in charge.*

MISSISSIPPI.

Temperature.—The mean was 0.4 above the normal; maximum, 81, at Hattiesburgh, 31st; minimum, 20, at Louisville, 4th and 13th; greatest monthly range, 55, at Louisville, Vaiden, and Enterprise; least monthly range, 32, at Bay Saint Louis.

Precipitation.—The average was 2.26 above the normal; greatest monthly, 12.55, at Fayette; least monthly, 3.79, at Greenville.—*R. B. Fulton, Signal Corps, University, director.*

METEOROLOGICAL REPORT OF THE MISSOURI STATE BOARD OF AGRICULTURE.

Temperature.—The mean was about 8 above the normal; maximum, 74, at Jefferson City, 8th; minimum, —1, at Pickering, 2d; greatest monthly range, 61, at Jefferson City; least monthly range, 29, at Warrenton.

Precipitation.—The average was 1.00 to 2.00 above the normal; greatest monthly, 7.10, at Gordonville; least monthly, 0.10, at New Haven.—*Levi Chubbuck, Secretary of State Board of Agriculture, Columbia, director; A. L. McRae, Sergeant, Signal Corps, assistant.*

NEBRASKA.

Temperature.—The mean was more than 10 above the normal; zero was not reached in the southeastern part of the state, and —10 was the lowest reached in any part of the state.

Precipitation.—The rainfall was unevenly distributed, ranging from 1.00 to over 2.00.—*Prof. Goodwin D. Swezey, Crete, director; G. A. Loveland, Sergeant, Signal Corps, assistant.*

NEVADA.

The month has been remarkable for lack of precipitation and extremely mild weather.

Temperature.—The mean was 2.9 above the normal; maximum, 68, at Mill City, 1st; minimum, —25, at Elko, 11th; greatest monthly range, 77, at Elko; least monthly range, 37, at Candelaria and Virginia City.

Precipitation.—The average was 1.34 below the normal; greatest monthly, 0.65, at Ely; least monthly, trace, at Mill City.

Wind.—Prevailing direction, northeast.—*Prof. Charles W. Friend, Carson City, director; D. C. Grunow, Corporal, Signal Corps, assistant.*

NEW ENGLAND METEOROLOGICAL SOCIETY.

Temperature.—The mean was 4.0 above the normal; maximum, 59, at Kingston (b), 12th; minimum, —30, at West Milan, 1st; greatest monthly range, 74, at West Milan; least monthly range, 32, at Block Island.

Precipitation.—The average was 2.85 above the normal; greatest monthly, 10.16, at Stevenson; least monthly, 1.60, at Newburyport (b).

Wind.—Prevailing direction, northwest.—*Prof. William H. Niles, Boston, Mass., president; Prof. Winslow Upton, Providence, R. I., secretary; J. Warren Smith, Private, Signal Corps, assistant.*

NEW JERSEY.

Temperature.—The mean was 4.7 above the normal; maximum, 59, at Egg Harbor City, 2d; minimum, 10, at Tenafly, 6th, 9th, and 20th; greatest monthly range, 45, at Egg Harbor City; least monthly range, 31, at Ocean City.

Precipitation.—The average was 2.93 above the normal; greatest monthly, 10.55, at South Orange; least monthly, 4.41, at Atlantic City.

Wind.—Prevailing direction, northwest.—*E. W. McGann, Sergeant, Signal Corps, New Brunswick, in charge.*

NEW YORK.

Temperature.—Maximum, 60, at New York City, 2d; minimum, —15, at Queensbury, 10th, and at Canton, 17th; greatest monthly range, 62, at Canton; least monthly range, 35, at Fort Columbus, Willets Point, and Setauket.

Precipitation.—Greatest monthly, 11.38, at Rondout; least monthly, 0.85, at Fleming.

Wind.—Prevailing direction, northwest.—*Prof. E. A. Fuertes, Dean of the College of Civil Engineering, Cornell University, Ithaca, director; R. M. Hardinge, Private, Signal Corps, assistant.*

NORTH CAROLINA.

Temperature.—The mean was 0.5 above the normal; maximum, 75, at Wilmington, 31st; minimum, 7, at Franklin, 7th; greatest monthly range, 56, at Marion; least monthly range, 35, at Hatteras.

Precipitation.—The average was 0.66 below the normal; greatest monthly, 8.98, at Highlands; least monthly, 2.86, at Norfolk, Va.—*Dr. Herbert B. Battle, Raleigh, director; C. F. von Herrmann, Sergeant, Signal Corps, assistant.*

NORTH AND SOUTH DAKOTA.

Temperature.—The mean was 12.0 above the normal; maximum, 60, at Millbank, S. Dak., 18th; minimum, -24, at Grafton, N. Dak., 15th; greatest monthly range, 73, at Oelrichs, S. Dak.; least monthly range, 41, at De Smet, S. Dak.

Precipitation.—The average was 0.43 below the normal; greatest monthly, 1.35, at Oelrichs, S. Dak.; least monthly, trace, at Howard, S. Dak., and New England City, N. Dak.

Wind.—Prevailing direction, northwest.—*S. W. Glenn, Sergeant, Signal Corps, Huron, S. Dak., in charge.*

OHIO.

Temperature.—The mean was 6.0 above the normal; maximum, 65, at Athens, 31st; minimum, 3, at Wauseon, 8th, and is the highest minimum temperature recorded for January since the opening of the Bureau.

Precipitation.—The average was 0.49 below the normal; greatest monthly, 4.76, at Georgetown; least monthly, 1.00, at Bellevue.

Wind.—Prevailing direction, southwest.—*Prof. B. F. Thomas, Columbus, director; C. M. Strong, Sergeant, Signal Corps, secretary and assistant.*

OREGON.

The characteristics of the month were the abnormally high temperature and the deficiency in precipitation.

Temperature.—The mean was 6.1 above the normal; maximum, 67, at Ashland, 20th; minimum, -14, at Silver Lake, 9th.

Precipitation.—The average was 2.34 below the normal; greatest monthly, 10.84, at Gardiner; least monthly, 0.16, at Burns.

Wind.—Prevailing direction, south.—*Hon. H. E. Hayes, Master State Grange, Oswego, director; B. S. Pague, Sergeant, Signal Corps, assistant.*

PENNSYLVANIA.

Temperature.—The mean was 4.0 above the normal; maximum, 64, at Uniontown, 29th; minimum, -4, at Eagle's Mere and Lewisburgh, 4th, at Columbus, 8th, and at Wellsborough, 9th.

Precipitation.—The average was nearly normal; greatest monthly, 8.74, at Girardville; least monthly, 1.22, at Greenville.

Wind.—Prevailing direction, northwest.—*Under direction of the Franklin Institute, Philadelphia; T. F. Townsend, Sergeant, Signal Corps, assistant.*

SOUTH CAROLINA.

Temperature.—Maximum, 75, at Columbia, 31st; minimum, 21, at Cheraw, 8th; greatest monthly range, 54, at Hardeeville; least monthly range, 39, at Port Royal.

Precipitation.—Greatest monthly, 7.12, at Evergreen; least monthly, 1.17, at Hardeeville.

Wind.—Prevailing direction, west.—*A. P. Butler, director, State Weather Service, and observer, Signal Service.*

TENNESSEE.

The month was characterized by rather mild temperature, and an excess of rainfall.

Temperature.—The mean was slightly above the normal; maximum, 73, at Greenville, Riddleton, and Austin, 31st; minimum, 15, at Rugby, 5th and 6th; greatest monthly range, 54, at Greenville, Springdale, and Riddleton; least monthly range, 36, at Memphis and Florence Station.

Precipitation.—The average was considerably in excess of the normal for the last eight years; greatest monthly, 7.92, at Lewisburgh; least monthly, 3.50, at Greenville.

Wind.—Prevailing direction, north and west.—*J. D. Plunket, M. D., Nashville, director; H. C. Bate, Signal Corps, assistant.*

TEXAS.

Temperature.—The mean was 4 to 6 above the normal over the eastern and southern portions, 3 to 5 below over the west and northwest portions, and normal over the central portion; maximum, 88, at Rio Grande City, 30th; minimum, 2, at Coldwater, 15th; greatest monthly range, 57, at Temple and Rio Grande City; least monthly range, 28, at Weatherford.

Precipitation.—The average was 3.00 to 6.00 above the normal over the coast region and the eastern and central portions, and 0.25 to 3.00 above over other portions; greatest monthly, 13.11, at Houston; least monthly, 0.27, at El Paso.—*D. D. Bryan, Galveston, director; I. M. Cline, Sergeant, Signal Corps, assistant.*

WISCONSIN.

Temperature.—The mean was 8.0 above the normal; maximum, 53, at Hayward, 4th; minimum, -16, at Hayward, 16th.

Precipitation.—The average was normal; greatest monthly, 2.80, at Embarras; least monthly, 0.25, at Mauston.

Wind.—Prevailing direction, northwest.—*R. E. Kerkam, Milwaukee, Sergeant, Signal Corps, in charge.*

Meteorological record of Army post surgeons, voluntary, and other co-operating observers, January, 1891.

Stations.	Temperature. (Fahrenheit.)			Precip'n.		Stations.	Temperature. (Fahrenheit.)			Precip'n.
	Max.	Min.	Mean.				Max.	Min.	Mean.	
Alabama.						Arkansas—Cont'd.				
Bermuda * f.....	73	21	47-8	1.41		Pine Bluff.....	66	23	41-8	4.19
Bessemer.....	70	24	41-9	7.52		Russellville.....	64	23	41-2	5.62
Brewton.....	75	25	49-1	5.50		Stuttgart.....	62	25	42-2	6.98
Childersburgh f.....	80	27	51-0	4.87		Texarkana.....	67	25	45-3	2.68
Citronelle.....	80	27	51-0	2.96		Winslow.....	58	20	35-8	4.17
Claiborne Landing.....				2.00		California.				
Columbiana f.....	72	20	44-0	6.77		Alcade *.....	65	25	47-0	0.15
Cordeiro f.....				4.73		Alcatraz Island.....	60	39	50-0	1.01
Decatur (1) f.....				7.02		Almaden *.....	65	32	50-0	0.70
Double Springs th.....	65	22	46-0	0.18		Anaheim *.....	72	38	54-1	0.24
Florence.....				3.00		Anderson.....	76	22	50-0	1.13
Gadsden.....				6.40		Angel Island.....	73	35	51-0	1.20
Greensborough.....	68	26	44-8	8.75		Antioch *.....	64	28	47-8	0.41
Jasper.....	70	18	40-8	8.11		Aptos *.....	72	28	49-1	1.08
Livingston (1) *.....	72	20	43-8	7.40		Arcata.....				3.62
Mountain Home.....	68	20	39-1	10.06		Atholne *.....	75	25	47-8	0.34
Mt. Vernon B'ks.....	75	21	40-7	4.25		Auburn *.....	69	32	48-0	0.88
Selma (1).....				1.39		Bakersfield *.....	68	30	47-3	0.20
Talladega.....				5.58		Beaumont *.....	68	28	49-8	0.00
Tuscaloosa.....				8.48		Belmont *.....	68	28	49-0	0.00
Tuscumbia (1).....	70	24	40-9	5.14		Benicia Barracks.....	70	30	48-2	0.65
Uniontown.....	74	24	51-2	6.81		Berendo *.....	65	28	44-7	0.12
Valley Head f.....	69	20	38-9	7.34		Berkley.....	68	35	49-9	1.13
Alaska.						Bishop Creek *.....	65	19	38-2	0.00
Juneau.....	50	5	35-1	20.51		Boca *.....	55	19	25-0	1.25
Killsnoo.....	52	10	35-9	8.35		Borden *.....	68	29	44-6	0.40
Arizona.						Brentwood.....	62	27	47-8	0.42
Antelope Valley.....				0.00		Brighton *.....	75	29	47-5	0.47
Ariz. Canal Co. Dam.....	70	26	48-6	0.01		Byron *.....	75	28	50-0	0.25
Ash Canyon.....	58	19	39-0	0.38		Caliente *.....	65	27	45-5	0.19
Benson *.....	66	23	42-8	0.38		Calistoga *.....	70	23	47-7	1.65
Bisbee *.....	70	22	40-5	0.55		Castroville *.....	78	33	52-5	0.48
Buckeye.....				0.00		Centerville *.....	72	34	52-5	0.65
Calabasas.....				0.35		Chico *.....	72	31	50-0	1.36
Casa Grande *.....	87	29	55-9	0.65		Cisco *.....	43	13	29-5	2.20
Chino.....	68	16	35-4	0.00		Collegrove.....				0.23
Chiricahua M't's.....				1.50		Collax *.....	74	33	53-5	1.95
Chloride.....	62	19	39-8	T.		Colton *.....	78	30	52-1	0.00
Cooleysg.....	48	7	26-4	1.58		Corning *.....	68	28	49-5	0.70
Cottonwood.....				2.10		Crescent City.....				5.23
Dragoon f.....				0.36		Davisville *.....	70	31	49-1	1.10
Dragon Summit *.....	58	32	42-6	0.33		Delano *.....	67	32	47-6	0.18
Dos Cabezos f.....				0.40		Delta *.....	72	27	48-2	3.72
Dudleyville.....				0.58		Downey *.....	69	33	50-4	0.35
Eagle Pass.....		16	28-8	0.62		Edgewood *.....	54	12	33-1	0.55
Farley's Camp.....		24	40-2	0.00		El Dorado *.....	69	27	45-1	1.07
Fort Apache.....	62	11	34-4	1.65		Elmira *.....	72	28	46-9	0.75
Fort Bowie.....	59	19	41-8	0.69		El Verano *.....	70	27	48-8	1.42
Fort Grant.....	60	20	39-6	0.82		Emigrant Gap *.....	52	16	33-6	1.70
Fort Huachuca.....	51	18	33-8	0.15		Esparto *.....	60	28	50-2	0.58
Fort Lowell.....	75	16	47-7	0.38		Evergreen.....				0.58
Gila Bend (1) *.....	66	38	51-8	0.00		Farlington *.....	74	27	47-8	0.43
Gila Bend (2) *.....	70	39	49-3	0.00		Felton *.....	71	20	47-7	1.26
Grand Central Mill.....				0.15		Fernando *.....	74	31	52-4	0.30
Holbrook f.....	51	11	30-6	0.20		Florence *.....	85	31	54-8	0.00
Maricopa *.....	61	43	50-3	0.02		Folsom *.....	64	31	47-1	0.60
Natural Bridge.....				0.30		Fort Gaston.....	57	27	42-4	4.38
Oro.....				1.10		Fort Mason.....	66	37	50-0	0.79
Pantano *.....	60	26	44-2	0.40		Fresno *.....	62	30	47-3	0.72
Payson.....				0.41		Fruto *.....	74	30	48-7	0.43
San Carlos.....	74	18	43-5	0.75		Galt *.....	85	30	47-9	4.31
San Simon *.....	68	16	41-2	0.35		Georgetown.....	68	27	45-84	0.06
Show Low f.....				1.50		Gilroy *.....	72	26	46-9	0.75
Signal f.....	70	25	46-3	0.00		Girard *.....	62	24	39-5	0.00
Simmons.....				T.		Glen Ellen *.....	75	25	47-1	1.45
Springerville.....				0.25		Goshen *.....	68	25	42-6	0.30
Strawberry.....				0.33		Grass Valley.....				1.54
Teviston.....				0.02		Haywards *.....	61	31	47-1	0.77
Texas Hill *.....	71	24	46-7	0.00		Hollister *.....	77	26	50-6	0.46
Tip Top f.....		31	43-8	0.00		Hornbrook *.....	56	13	34-9	0.35
Tucson (1) f.....	67	23	44-9	0.16		Hydenville.....	64	26	45-1	3.32
Tucson (2) *.....	81?	43?	62-9?	0.12		Jone.....	63	23	45-0	0.40
Walnut Grove.....				0.00		Iowa Hill *.....	72	30	46-6	1.96
Walnut Ranch.....				0.87		Jolon.....				0.55
Whipple Barracks.....	62	11	34-0	0.00		Julian *.....	65	30	44-8	0.07
Willcox *.....	69	9	37-4	0.54		Keene *.....	62	22	41-3	0.23
Wilgus.....				0.90		Kingsburgh *.....	65	25	45-8	0.58
Wood Canon.....				0.30		King City *.....	72	22	46-3	0.40
Woodruff.....				0.50		Knight's Landing *.....	61	32	46-7	0.53
Yuma.....	70	34	49-6	0.00		Lathrop *.....	68	28	47-5	0.25
Arkansas.						Laurel *.....	71	29	46-4	1.22
Arkansas City f.....				3.29		Lemoore *.....	65	25	44-7	0.15
Brinkley.....	64	32	47-7	6.94		Livermore *.....	80	28	50-5	0.54
Camden f.....	65	25	42-7	6.22		Livingston *.....	70	23	47-1	0.37
Canby.....	60	24	41-2	5.37		Long Beach *.....	72	29	52-8	0.20
Dallas.....	58	22	40-4	7.36		Los Angeles *.....	82	30	53-9	0.20
Dardanelle.....				5.90		Los Banos *.....	66	25	45-8	0.07
Devall's Bluff.....	65	20	41-2	6.04		Los Gatos (1) *.....	68	28	51-3	0.92
Fayetteville *.....	64	18	37-6	1.29		Los Gatos (2) *.....	65	30	48-0	1.10
Forrest City f.....	64	32	47-2	5.83		Martinez *.....	62	30	46-4	0.79
Fulton.....				5.63		Milton (near).....	61	32	48-0	0.39
Harrisburgh.....	58	22	39-1	5.08		Marysville *.....	85	28	51-4	0.54
Helena (1) f.....				5.75		Menlo Park *.....	68	29	48-7	0.69
Helena (2).....	64	23	41-0	9.03		Merced *.....	103	28	52-6	0.33
Hot Springs.....	59	21	40-4	7.06		Modesto *.....	75	28	49-4	0.16
Lead Hill *.....	71	13	38-3	2.25		Mojave *.....	97	24	44-1	0.00
Lonoke.....	65	27	45-0	6.94		Monson *.....	63	27	44-0	0.39
Malvern.....	64	28	45-8	5.05		Montague *.....	52	24	34-0	0.70
Mount Nebo.....	63	21	39-8	5.54		Monterey *.....	66	26	46-0	1.06
Newport (1) f.....				5.61		Monterey (Hotel del Monte).....	71	30	51-5	0.00
Newport (2).....	60	20	37-8	5.19		Napa *.....	69	25	48-6	1.17
Osceola.....	65	22	40-4	6.33		National City *.....	83	31	54-0	0.62
Ozone.....	60	18	37-8	3.47						